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EXAMINER
KIM, CHONG R

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/409,347	Applicant(s) NAITO ET AL.	
	Examiner Charles Kim	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/16/2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,27,41,65 and 66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15,27,41,65,66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on December 16, 2002 have been entered and made of record.

2. In view of Applicant's amendment, the 112 first paragraph rejections are withdrawn.

3. Applicant's arguments with respect to the art rejections of claims 1, 15, 27, and 41 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 13 is objected to because of typographical errors in the phrase "to be applied to said data by said electronic watermarking means" in lines 2-3. There is no antecedent basis for "said electronic watermarking means". It appears that the applicant intended the phrase to read "to be applied to said data by an electronic watermarking means". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 10, 13-15, 27, 41, 65, and 66 are rejected under 35 U.S.C. 102(e) as being anticipated by Shur U.S. Patent No. 6,330,672 ("Shur").

Referring to claim 1, Shur discloses an information processing apparatus comprising:

a. storage means (108) for storing data (figure 1A)

b. setting means (120) for setting a timing for applying an electronic watermark to the data when storing the data in the storage means [col. 9, lines 4-63 and figure 1A. Shur teaches that the watermark index selector (120) selects index locations in the data (input bitstream) for applying the watermark (col. 9, lines 52-63 and col. 10, lines 37-40). Shur further states that the index positions are determined by generating a sequence that that represents all the candidate opportunities for inserting watermark data (col. 9, lines 10-12). Examiner notes that determining a sequence that represents index positions for inserting a watermark inherently determines a timing for applying the watermark because each selected index location of the bitstream where the watermark is inserted corresponds to a particular point in time at which the watermark is applied. Therefore, inserting the watermark in the selected index locations results in setting a timing for applying the watermark].

Referring to claim 10, Shur further discloses that the setting means is capable of designating one of a plurality of electronic watermarking methods (col. 9, lines 21-50).

Referring to claim 13, Shur further discloses that the setting means is capable of designating watermark information that is to be applied to the data by an electronic watermarking means (140), and wherein the electronic watermarking means applies the watermark information designated by the setting means to the data (col. 9, line 65-col. 10, line 26

and figure 1A. Note that the "watermark parameters" in col. 9, line 67 are interpreted as the designated watermark information).

Referring to claim 14, Shur further discloses a management means (130) for managing the watermark information designated by the setting means, wherein the electronic watermarking means is capable of employing a plurality of electronic watermarking methods, and wherein the management means employs a common form to manage the watermark information, regardless of whether the watermark information has a different form [col. 9, line 65-col. 10, line 34. Note that the grouping of the watermark parameters (col. 10, lines 12-19) is interpreted as being analogous to managing the watermark information. It is also noted that "multi-bit" (col. 10, line 33) is interpreted as the common form employed by the management means].

Referring to claim 15, see the rejection of at least claim 1 above.

Referring to claim 27, see the rejection of at least claim 1 above. Examiner notes that the "registration step for registering data in a memory" in line 3 is interpreted as a step for storing data in a memory as disclosed on page 25, lines 5-12 of the applicant's specification. Shur discloses a step of storing data in a memory and a setting step of setting a timing for applying an electronic watermark, as disclosed above.

Referring to claim 41, see the rejection of at least claim 27 above.

Referring to claim 65, see the rejection of at least claim 1 above. Shur further discloses an information processing apparatus comprising:

a. storage means (108) for storing data (figure 1A)

b. electronic watermarking means (140) for applying an electronic watermark to the data (figure 1A)

c. communication means (108) for transmitting the data (col. 6, lines 65-67 and figure 1A)

d. setting means (120) for designating a timing for applying an electronic watermark to the data among a plurality of timings until the data is transmitted by the communication means [col. 9, lines 4-63 and figure 1A. Note that determining an "index where in the quantizer output a digital watermark is to be insterted" (lines 61-63) is interpreted as designating a timing for applying the watermark (see the rejection of claim 1). It is further noted that "all the candidate opportunities for inserting watermark data" (lines 11-12) is interpreted as a plurality of timings. Shur teaches that an output (random number) binary sequence and the "candidate" sequence are ANDed together to obtain index positions for inserting the watermark. The index positions resulting from the AND process will be a sequence that is designated among "all the candidate opportunities (sequences)"].

Referring to claim 66, see the rejection of at least claim 65 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shur U.S. Patent No. 6,330,672 ("Shur").

Referring to claim 2, Shur teaches that the data stored in the storage means (108) is transmitted (outputted) if the storage means is not full (col. 6, lines 61-67. It is noted that transmitting the data if the storage means is not full is interpreted as setting a timing for transmitting the data; since the data will be transmitted during a time when the storage buffer is not full). Shur further states that if the storage means is full, an indicator is fed back to stop the process (col. 6, lines 63-65. Note that the indicator stops the data from being stored in the storage means). Shur does not explicitly state that a timing is set for storing the data. However, it would have been obvious to utilize the indicator of Shur to set a timing for storing the data in the storage means, in order to allow the data to be stored without any information being lost due to the storage means being full.

Referring to claim 3, see the rejection of at least claim 2 above. Examiner notes that "outputting" the data is interpreted as being analogous to "transmitting" the data.

Referring to claim 4, Shur further discloses that the data is outputted (presented) after an electronic watermark has been removed (extracted) from the data (col. 12, lines 4-11 and figure 3).

Referring to claim 5, Shur further discloses a display means (320) for providing a display of the data, wherein the display means displays the data to which an electronic watermark is applied (col. 11, line 67-col. 12, line 11 and figure 3).

Referring to claim 6, Shur further discloses that the data is outputted by using an output device (108) that is capable of communicating with the information processing apparatus (figure 1A).

Referring to claim 7, see the rejection of at least claim 4 above. Shur fails to explicitly state that the output device removes the watermark. However, it would have been obvious to remove the watermark with the output device, since the embedded watermark deteriorates the original data to some degree. One would be motivated to remove the watermark with the output device before outputting the data, in order to eliminate deterioration of the data as it is being outputted.

Referring to claim 8, Shur teaches an output device (buffer) as disclosed above. Shur fails to explicitly state that when the output of the data is complete, the output device deletes data received from the information processing apparatus. Official notice is taken that it was exceedingly well known for buffers to delete data once the data is completely outputted. One would have been motivated to delete the received data after it has been completely outputted in order to free up space/memory to store additional incoming data. Therefore, it would have been obvious to utilize the output device (buffer) of Shur to delete the data received from the information processing apparatus after the output of the data is completed.

7. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shur U.S. Patent No. 6,330,672 ("Shur"), further in view of Stefik et al., U.S. Patent No. 6,233,684 ("Stefik").

Referring to claim 9, Shur fails to teach that the output process does not halt even upon receiving of a halting instruction.

Stefik teaches a data output process that protects the user in the situation where the outputting process (printing) may become inadvertently terminated before the entire digital work is outputted (printed) (col. 13, lines 17-19). Therefore, it would have been obvious to continue the output/printing process even upon receiving a halt instruction. In the case where outputting the data requires a fee (Stefik, col. 13, line 13), one would be motivated to continue output even upon receiving a halt instruction, so that the user obtains the entire data that they paid for.

Shur and Stefik are both concerned with applying an electronic watermark to data. Stefik provides a secure method for outputting watermarked data. Therefore, it would have been obvious to modify the output process of Shur, so that it does not halt even upon receiving of a halting instruction, as taught by Stefik.

Referring to claim 11, Shur discloses a plurality of watermarking methods as disclosed above. Shur teaches at least a method for employing an electronic watermark as invisible information (col. 10, lines 53-55), but fails to teach employing an electronic watermark as invisible information.

However, employing an electronic watermark as both visible and invisible information was exceedingly well known in the art. For example, Stefik teaches that multiple watermarking (visible and invisible) technologies may be applied to the same digital work (col. 8, lines 52-55).

Shur and Stefik are both concerned with applying an electronic watermark to data. Stefik's method improves the resistance of the watermark by allowing the invisible watermark to remain in the data even if the visible watermark is removed (Stefik, col. 8, lines 55-56).

Therefore, it would have been obvious to modify the plurality of watermarking methods of Shur to include an electronic watermark as both visible and invisible information, as taught by Stefik.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shur U.S. Patent No. 6,330,672 ("Shur"), further in view of Yoshiura et al., U.S. Patent No. 6,131,162 ("Yoshiura").

Referring to claim 12, Shur discloses a plurality of electronic watermarking methods that includes a method for employing an electronic as removable information (col. 12, lines 4-6), but fails to include an electronic watermark as unremovable information.

However, employing an electronic watermark as both removable and unremovable information was exceedingly well known in the art. For example, Yoshiura discloses a plurality of watermarking methods that includes at the least a method for employing an electronic watermark as removable (col. 14, lines 22-25) and a method for employing an electronic watermark as unremovable information (col. 13, lines 55-56).

Shur and Yoshiura are both concerned with applying an electronic watermark to data. Yoshiura provides a flexible watermarking method that prevents unauthorized use of the data. Therefore, it would have been obvious to modify the plurality of watermarking methods of Shur to include an electronic watermark as both removable and unremovable information, as taught by Yoshiura.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 703-306-4038. The examiner can normally be reached on Monday thru Thursday 8:30am to 6:00pm and alternating Fridays 9:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

ck
March 7, 2003

Jon Chang
Primary Examiner